

MEMORANDUM FOR: Clifton S. Middleton
Project Director, Survey Section B

FROM: Charles W. Challstrom
Director, National Geodetic Survey

SUBJECT: INSTRUCTIONS: Reconnaissance (Mark Setting)
at Goddard, Maryland, CORS Site
Task Number: 8K6D4000

GENERAL:

The National Geodetic Survey (NGS) has established two reference marks (NORTH GEOS PIER and SAT TRACK STA 002) at the Goddard Continuously Operating Reference Station (CORS) site in Maryland. These stations will be tied to the CORS antenna at the site, as well as to the local Federal Base Network/Cooperative Base Network (FBN/CBN) through GPS observations. Thus, reconnaissance is required to determine if the marks are still suitable for GPS occupation.

Since one of the reference marks (NORTH GEOS PIER) is a FBN station, it can serve as the FBN/CBN tie. No other FBN/CBN stations need to be reconned.

PURPOSE:

The subsequent GPS project will provide reference station coordinates relative to the local FBN/CBN, thus reducing the potential for inconsistencies between the CORS site and the local network. It will also provide a check on the FBN/CBN relative to the CORS coordinates. The on-site reference marks will provide a very accurate tie to the antenna as an aid to repositioning the antenna should that become necessary.

MARK SETTING

Reference marks NORTH GEOS PIER (PID JV5895) and SAT TRACK STA 002 (PID JV5875) have been established by the NGS leveling party. If the two reference marks are both still suitable for GPS occupation, no further action is required.

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However, if either of the marks is not suitable for GPS, another reference mark(s) must be established instead.

The NGS IDB (list attached) shows 10 marks (5 vertical, 2 horizontal, and 3 both horizontal and vertical), all between approximately 36 and 139 m from the CORS. If a new reference mark(s) is required, and any of these stations are suitable for use as a CORS reference mark, they should be used, with preference given to stations with vertical control. If no stations from the NGS IDB are suitable as CORS reference marks, and new reference mark(s) are required, reference marks GODE A and, if necessary, GODE B must be sited and set at the site. (If NORTH GEOS PIER is unsuitable for GPS occupation, contact Doug Hendrickson, listed under LIAISON, to obtain the name of the substitute FBN/CBN tie station to reconn.)

In general, the two CORS reference marks must be suitable for GPS occupation and be located within 1 km of the CORS antenna site. They must be at least B-stability, with A-stability preferred. The minimum quality mark set shall be a GPS 3-D monument. The CORS marks should be set as close as possible to the CORS antenna. These marks are not established to obtain azimuth with optical surveying equipment. The purpose of these marks is to provide redundant reference marks for referencing the CORS antenna at the facility.

STATION DESCRIPTIONS:

Station descriptions must be submitted in computer-readable form using DDPROC software. Include the name, address, and, if public ownership, the telephone number of the responsible party. Do not include the telephone numbers of private property owners.

LIAISON:

The street address of the following NGS offices in Building SSMC3 is:

1315 East-West Highway
Silver Spring, MD 20910-3282

Questions concerning survey operations shall be directed to:

William T. McLemore, Jr.
Chief, Field Operations Branch
Observation and Analysis Division
SSMC3 -- N/NGS41, Station 8564
Telephone: 301-713-3215, ext. 117
FAX: 301-713-4176
e-Mail: mclemore@ngs.noaa.gov

Questions concerning the GPS portion of the project shall be directed to:

Stephen J. Frakes or Douglas R. Hendrickson
Project Development Branch
Spatial Reference System Division
SSMC3 -- N/NGS21, Station 8853
Telephone: 301-713-3194, ext. 111 or ext. 127
FAX: 301-713-4316
e-Mail: steve@ngs.noaa.gov or dough@ngs.noaa.gov

Contact the Point-of-Contact 3 or 4 days before arriving at the CORS site. The point of contact is:

Dr. Thomas A. Clark
NASA Goddard Space Flight Center
Space Geodesy Branch, Code 926.9
NASA/GSFC
Greenbelt, MD 20771
Telephone: 301-286-5957
FAX: 301-286-4943
e-Mail: clark@tomcat.gsfc.nasa.gov

DATA:

All records for this project shall be archived following the VIRGINIA FBN, 2000, reconn project instructions.

REPORT:

A summary of reconnaissance activities shall be included in

the
final project report.

ADDRESS:

Keep the Field Operations Branch informed of the party's physical address and telephone number at all times.

PUBLICITY:

See "NGS Operations Handbook," Section 1.4.1.

EXPENSES:

Expenses for this project will be charged to Task Number 8K6D4000.

TRAVEL:

Travel and per diem are authorized in accordance with Federal Travel Regulations, Part 301-11, Per Diem Allowances. Current per diem rates were effective January 1, 2000.

ACKNOWLEDGMENT:

Please acknowledge receipt of these instructions in your Monthly Report.

cc: N/NGS - D. Zilkoski*
N/NGS - S. Misenheimer*
N/NGS - D. Milbert
N/NGS1 - G. Mitchell
N/NGS1x1 - D. Mulcare
N/NGS11 - S. Cofer
N/NGS21 - S. Frakes
N/NGS21 - R. Anderson
N/NGS21 - C. Craig*
N/NGS21 - D. Hendrickson*
N/NGS4 - E. Wade
N/NGS41 - J. Blackwell
N/NGS41 - W. McLemore
FGCS MEMBERS*
Dr. Thomas Clark, NASA Goddard Space Flight Center

* first page only

